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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/773,445

02/09/2004

Jean-Pierre LePage

14611

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11/03/2006

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EXAMINER

DESCHERE, ANDREW M

ART UNIT

PAPER NUMBER

2836

DATE MAILED: 11/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/773,445

Applicant(s)

LEPAGE, JEAN-PIERRE

Examiner

Andrew M. Deschere

Art Unit

2836

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____                                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/9/04</u> .  | 6) <input type="checkbox"/> Other: ____                           |

## **DETAILED ACTION**

### ***Priority***

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in France on February 10, 2003. It is noted, however, that applicant has not filed a certified copy of the FR0301551 application as required by 35 U.S.C. 119(b).

### ***Drawings***

The drawings are objected to because they lack textual labels for block diagram components. Please provide labels for these elements, such as Figure 1: 8, 20, 42; Figure 2: 52, 54, 56, 66; and Figure 4: 82, 84, 86, 92. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 2, and 3 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. These claims recite the contradictory transitional phrase "comprises the step[s] consisting in". It is unclear whether the transitional phrase is intended to be of the open- or closed-form. For the purposes of examination, the Examiner will assume the broader, open-form "comprise".

Examiner further notes that claim 7 uses the closed-form transitional phrase "consists in".

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-10 rejected under 35 U.S.C. 102(b) as being anticipated by Kiraly (US 5,467,242).

Kiraly discloses a protection device for a power transistor (Fig 2). The collector-emitter voltage of the transistor is read and compared to a reference voltage. If an overvoltage condition exists, a timer initializes. If the overvoltage condition disappears by the end of a predetermined time period, normal operation of the transistor continues. If the overvoltage

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condition persists, the gate voltage on the transistor is removed by disabling the input of the gate driver (column 4, lines 33-51). An additional timer is provided that prevents false triggering of an overvoltage condition during turn-on of the transistor (column 4, lines 28-32).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11-14 rejected under 35 U.S.C. 103(a) as being unpatentable over Kiraly and Shekhawat (US 6,275,093).

Kiraly teaches a protection scheme for a power transistor, but does not teach that the voltage on the control node of the transistor is controlled with respect to a second collector-emitter voltage threshold. Shekhawat teaches a gate drive with short circuit protection, wherein the gate drive voltage is decreased to a level above the threshold voltage before the transistor is shut off by gradually decreasing the gate voltage (column 3, lines 7-45; Figure 3, schematic; Figure 6, voltage waveform). The range of operating values of VDD is +12V to +16V, -VEE from -12V to -16V, and VCC from +5V to +15V (column 4, lines 19-28). Zener diodes are provided for voltage comparison purposes, such as 8V and 10V (column 6, lines 53-55). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide gradual switching in the invention of Kiraly to ensure low conduction and switching losses while providing safe turn-off (column 3, lines 46-51).

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Claims 15-18 rejected under 35 U.S.C. 103(a) as being unpatentable over Kiraly and Kesler (US 6,194,884).

Kiraly teaches a protection scheme for a power transistor, but does not teach that a computer is adapted to control the gate drive to the transistor. Kesler teaches a gate driver for a transistor with an external input EST (Figure 2) that may be received from a computer (column 6, lines 5-16). A combination of Kiraly and Kesler would provide computer timing and control of the voltage on the gate of a power transistor. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Kiraly and Kesler to provide an adaptable and programmable timing delay for detecting an overvoltage condition in a transistor.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. John (US 6,097,582) teaches short circuit protection of a power transistor.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew M. Deschere whose telephone number is (571) 272-8391. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (571) 272-2800 x36. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AMD

A handwritten signature in black ink, appearing to read 'B. Sircus', with a long, sweeping horizontal stroke extending to the right.

**BRIAN SIRCUS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800**